

U.S. Serial No. 08/860,007
March 19, 1998

IN THE CLAIMS:

Please cancel claims 1 - 7 and 9-12 without prejudice.

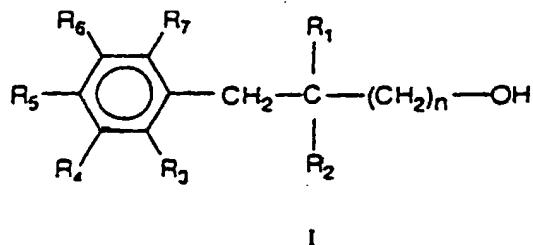
Please amend claim 8 as follows:

Claim 8, line 1, replace "6" with --14 --;

line 2, delete "or II".

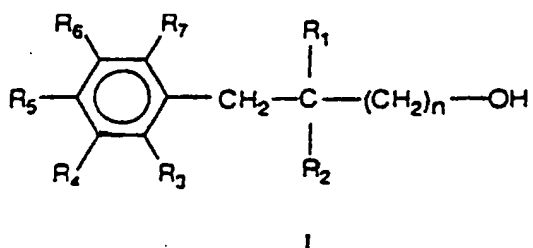
Please add new claims 13-25 as follows:

- -13. A compound according to formula I,



wherein R₁, R₃, R₅, R₆, and R₇ are hydrogen; R₂ is an ethyl group; R₄ is chlorine; and n is 1 or 2.

14. A disinfectant, antiseptic, antimycotic, deodorant or preservative comprising:
- a compound selected from alcohols, surfactants and solvents; and
- at least one compound according to formula I:



wherein,

R_1 is hydrogen or is selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl;

R_2 is selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl; and

each of R_3 to R_7 independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2,

with the proviso, that

i) when R_1 and all groups R_3 through R_7 are hydrogen, then

$$n = 2;$$

ii) when R_1 and R_2 are C_1 - C_6 alkyl and

a) all groups R_3 to R_7 are hydrogen, or

b) R_5 is methyl, methoxy or chloride, and all other groups R_3 ,

R_4 , R_6 and R_7 are hydrogen,

then $n = 2$;

iii) when R_1 , R_2 and R_4 are methyl and all groups R_3 and R_5 through R_7 are hydrogen, then $n = 2$;

iv) when R_1 and all groups R_3 , R_4 , R_6 and R_7 are hydrogen and R_5 is methyl, isopropyl, tert-butyl, or methoxy, then $n = 2$;

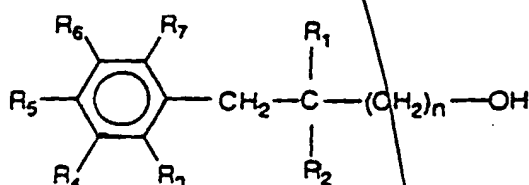
v) when R_1 , R_3 , R_6 and R_7 are hydrogen, R_2 is methyl, and R_4 and/or R_5 are hydrogen or C_1 - C_6 alkyl, then $n = 2$;

vi) when R_1 and R_4 through R_7 are hydrogen, R_2 is methyl or ethyl, and R_3 is methyl or methoxy, then $n = 2$;

vii) when R_1 , R_3 , R_5 and R_7 are hydrogen, R_2 is methyl, R_4 and R_6 are methyl or R_4 is hydrogen and R_6 is methyl, then $n = 2$; and

viii) when R_1 is hydrogen, R_2 is butyl, R_3 and R_5 are chloride, and all other groups R_4 , R_6 and R_7 are hydrogen, then $n = 2$.

15. Process for the production of a compound of formula I:



wherein,

R₁ is hydrogen or is selected from C₁-C₈ alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C₂-C₈ alkenyl and C₃-C₈ alkynyl;

R₂ is selected from C₁-C₈ alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C₂-C₈ alkenyl and C₃-C₈ alkynyl; and

each of R₃ to R₇ independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C₁-C₈ alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C₂-C₈ alkenyl and C₃-C₈ alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2;

with the proviso, that

i) when R₁ and all groups R₃ through R₇ are hydrogen, then

n = 2;

ii) when R₁ and R₂ are C₁-C₆ alkyl and

a) all groups R₃ to R₇ are hydrogen, or

b) R₅ is methyl, methoxy or chloride, and all other groups R₃,

R₄, R₆ and R₇ are hydrogen,

then $n = 2$;

iii) when R_1 , R_2 and R_4 are methyl and all groups R_3 and R_5 through R_7 are hydrogen, then $n = 2$;

iv) when R_1 and all groups R_3 , R_4 , R_6 and R_7 are hydrogen and R_5 is methyl, isopropyl, tert-butyl, or methoxy, then $n = 2$;

v) when R_1 , R_3 , R_6 and R_7 are hydrogen, R_2 is methyl, and R_4 and/or R_5 are hydrogen or C_1 - C_6 alkyl, then $n = 2$;

vi) when R_1 and R_4 through R_7 are hydrogen, R_2 is methyl or ethyl, and R_3 is methyl or methoxy, then $n = 2$;

vii) when R_1 , R_3 , R_5 and R_7 are hydrogen, R_2 is methyl, R_4 and R_6 are methyl or R_4 is hydrogen and R_6 is methyl, then $n = 2$; and

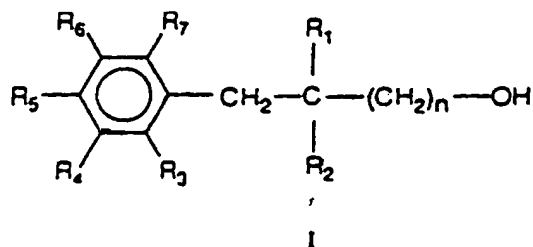
viii) when R_1 is hydrogen, R_2 is butyl, R_3 and R_5 are chloride, and all other groups R_4 , R_6 and R_7 are hydrogen, then $n = 2$;

said process comprising the steps of:

- a) monoalkylating a malonic acid dialkyl ester to introduce the group R_2 ;
- b) dialkylating the monoalkylated malonic acid alkyl ester with a benzyl halide optionally substituted at the aromatic ring to introduce the groups R_3 through R_7 which are other than hydrogen;
- c) saponifying and decarboxylating the dialkylated malonic acid dialkyl ester to form a corresponding 3-aryl-substituted propionic acid, and

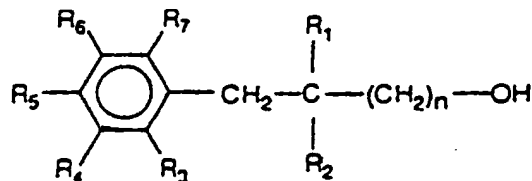
- d) reducing the 3-aryl-substituted propionic acid to form a desired alcohol of formula I.

16. A composition according to claim 14, wherein said compound according to formula I is present in an amount of about 0.01 to about 10% by weight.
17. A composition according to claim 14, wherein said compound according to formula I is present in an amount of about 0.05 to about 8% by weight.
18. A composition according to claim 14, wherein said compound according to formula I is present in an amount of about 0.1 to about 5% by weight.
19. A compound according to the formula I



wherein R_3 , R_4 , R_6 and R_7 are all hydrogen, R_5 is methyl, R_2 is ethyl, R_1 is hydrogen, and $n = 1$.

20. Process for the production of a compound of formula I:

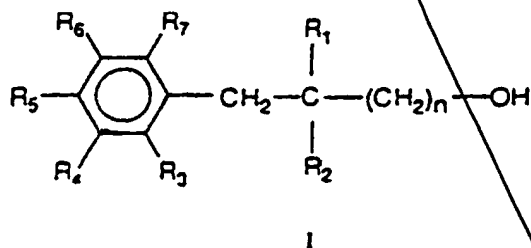


wherein, R_3 , R_4 , R_6 and R_7 are all hydrogen, R_5 is methyl, R_2 is ethyl, R_1 is hydrogen, and $n = 1$

said process comprising the steps of:

- a) monoalkylating a malonic acid dialkyl ester to introduce the group R_2 ;
- b) dialkylating the monoalkylated malonic acid alkyl ester with a benzyl halide optionally substituted at the aromatic ring to introduce the groups R_3 through R_7 which are other than hydrogen;
- c) saponifying and decarboxylating the dialkylated malonic acid dialkyl ester to form a corresponding 3-aryl-substituted propionic acid, and
- d) reducing the 3-aryl-substituted propionic acid to form a desired alcohol of formula I.

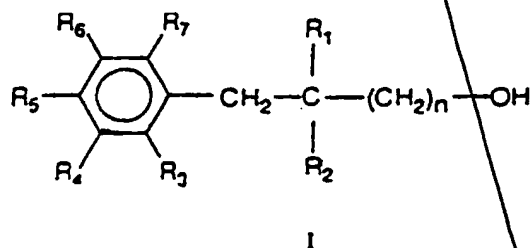
21. A shampoo or shower gel containing a preservative comprising:
a compound selected from alcohols, surfactants and solvents;
a re-fatting agent; and
a compound according to formula I:



wherein,

- R_1 is hydrogen or is selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl;
 R_2 is selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl; and
each of R_3 to R_7 independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2.

22. A method of disinfecting a surface comprising the step of applying a disinfectant to said surface, said disinfectant comprising:
a compound selected from alcohols, surfactants and solvents; and
a compound according to formula I according to formula I:

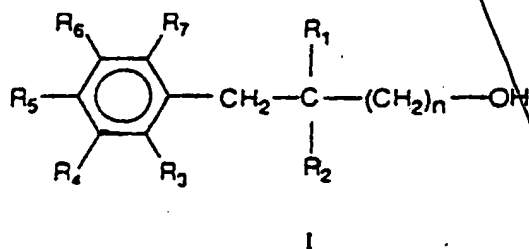


wherein,

- Sub C1 cancel*
- R_1 is hydrogen or is selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl;
 R_2 is selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl; and
each of R_3 to R_7 independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C_1 - C_8 alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C_2 - C_8 alkenyl and C_3 - C_8 alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2.

23. A method according to claim 22, wherein said surface is skin, a mucous membrane, or a surgical glove.

24. A method of deodorizing a surface comprising the step of applying a disinfectant to said surface, said deodorant comprising:
a compound selected from alcohols, surfactants and solvents; and
a compound according to formula I:



wherein,

- R_1 is hydrogen or is selected from $\text{C}_1\text{-C}_8$ alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, $\text{C}_2\text{-C}_8$ alkenyl and $\text{C}_3\text{-C}_8$ alkynyl;
 R_2 is selected from $\text{C}_1\text{-C}_8$ alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, $\text{C}_2\text{-C}_8$ alkenyl and $\text{C}_3\text{-C}_8$ alkynyl; and
each of R_3 to R_7 independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from $\text{C}_1\text{-C}_8$ alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, $\text{C}_2\text{-C}_8$ alkenyl and $\text{C}_3\text{-C}_8$ alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2.

25. A method according to claim 24, wherein said surface is skin. - -